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1733

PATENT  
Customer No. 22,852  
Attorney Docket No. 7707.0021-00

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
Alan H. ANDERSON, et al. ) Group Art Unit: 1733 ✓  
Application No.: 10/086,685 ) Examiner: Justin R. Fischer  
Filed: March 4, 2002 )  
For: FILAMENT WINDING )  
APPARATUS AND METHODS OF )  
WINDING FILAMENT )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**THIRD SUPPLEMENTAL**  
**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached PTO 1449. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application. A copy of the listed document (a letter dated December 29, 2003, from Craig Metcalf of Madson & Metcalf to Brian Kacedon of Finnegan, Henderson, Farabow, Garrett, & Dunner, LLP), including the references included therewith, are attached.

Applicants respectfully request that the Examiner consider the listed document and the included references and indicate that it was considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the references included with the listed document are material or constitute "prior art." If the Examiner applies any of the references as prior art against any claim in the application and applicants determine that the references do not constitute "prior art" under United States law, applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such references.

### **THE DOCUMENT**

The listed document was provided by attorneys for Rocky Mountain Composites ("RMC"). As noted in the document, several of the inventors of the above-referenced application are current or former employees of RMC. The document also states: "[I]n connection with ongoing development in this technology, [RMC] in conjunction with . . . Toyota, has performed an engineering based analysis of the claims of the above-referenced patent application." This statement is erroneous because neither Toyota nor any Toyota employee or inventor participated in the preparation of the document in any way. At least for this reason as well as for the reasons provided below, Applicants respectfully disagree with the conclusions stated in the listed document. Applicants reserve the right to take further action to establish the patentability of the disclosed invention, should the arguments of the document be applied against the claims of the present application.

The listed document includes nine attachments. The first is titled "Attachment 1" and includes a discussion of the claims of the present application.<sup>1</sup> Applicants address the contentions of Attachment 1 below.

The remaining eight attachments are various references. These references are cited in brackets in Attachment 1 as support for the contentions of Attachment 1.<sup>2</sup> It should be noted that Attachment 1 cites nine references ([1] - [9]), however, the attorneys for RMC provided applicants with only eight references. Moreover, the attorneys for RMC neither provided a list of these references nor numbered any of these references. Upon review of Attachment 1, Applicants find they were provided only with references [1]-[8]. For the Examiner's convenience, a list of the eight references appears below and the Applicants have placed numbered tabs before each reference corresponding to what Applicants find are the reference numbers used in the listed document. For the remainder of this Information Disclosure Statement, when Applicants refer to a reference by number, they will be referring to the numbers provided below.

Reference [1]	Radack, David V., "Reading and Understanding Patent Claims," <a href="http://www.tms.org/pubs/journals/JOM/matters/matters-9511.html">http://www.tms.org/pubs/journals/JOM/matters/matters-9511.html</a> , Sept. 29, 2003.
Reference [2]	"Filament Winding Composite Structure Fabrication," Society for the Advancement of Material and Process Engineering, 1991.

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<sup>1</sup> Applicants note that the upper right margin of Attachment 1 indicates that it is nine pages long. Applicants were only provided with pages 1-8. Moreover, Attachment 1 appears to end on page 8.

<sup>2</sup> For example, on page 1 of Attachment 1 under claim 2, the following sentence appears: "A 'mandrel supporting the structure' viewed in the context of Claim 1 describes standard filament winding tooling technology. [2]" The "[2]" is presumably a citation to reference number 2.

Reference [3]	Entec Composite Machines Home Page, <a href="http://www.entec.com">http://www.entec.com</a> , December 19, 2003.
Reference [4]	McClellan Anderson Home Page, <a href="http://www.mcclellananderson.com">http://www.mcclellananderson.com</a> , December 19, 2003.
Reference [5]	Walsh, Paul et al., "Carbon Fiber Property Translation into Composite - A Comparison of Commercial Grade 48K Carbon Fibers Versus 12K Aerospace Fibers."
Reference [6]	"The Mission: To Deliver Large-Tow Carbon Fiber in Filament Winding Applications."
Reference [7]	User Manual for Cadwind NG for Windows, 1999.
Reference [8]	Marchel, Oliver, "Space Qualification Program for CFRP-Prepregs Used for Design of Deployable Booms as a Main Structural Part of a Solar Sail."

#### **THE CITED REFERENCES**

Before addressing the contentions of Attachment 1, Applicants note that references [1], [3], [4], [6], and [8] cannot provide a basis for finding the claims of the present application unpatentable.

Reference [1] has nothing to do with the technology at issue. Reference [1] merely provides a general description of patent claim interpretation. Therefore, reference [1] does not provide any basis for rejecting the claims of the present application.

References [3] and [4] are printouts of web pages from Entec Composite Machines and McClellan Anderson, respectively. These documents indicate that they were printed on December 19, 2003 and provide no indication of any earlier date relating to the technology disclosed in those web pages. Because these documents were printed over two years after the priority date for the present application, these

documents cannot qualify as prior art. Therefore, references [3] and [4] do not provide any basis for rejecting the claims of the present application.

References [6] and [8] provide no indication of the date on which they were created, published, or available to the public. Absent any evidence of the date of these references, these documents also cannot provide any basis for rejecting the claims of the present application.

For these reasons, references [1], [3], [4], [6], and [8] cannot establish that the claims of the present application are unpatentable. Therefore, to the extent that the contentions made in Attachment 1 rely on references [1], [3], [4], [6], and [8], Applicants respectfully submit that these contentions are without merit. For this reason, Applicants only address below those arguments made in Attachment 1 with respect to references [2], [5], and [7].

### **ATTACHMENT 1**

The arguments made by RMC are addressed in the order in which they are presented in Attachment 1. As explained below, the document at issue (or any of its attachments or cited references) cannot and has not established the unpatentability of any claim of the present application.

#### **Application Claims 1, 2, and 16**

RMC contends that claim 1 is not novel because, in its opinion, the (1) “spool section”; (2) “transport”; and (3) “controller”; are “common to all filament winding machines going back to the 1950s.” RMC cites only to reference [2] to support this position. While Applicants do not concede this point, RMC’s argument must fail because it does not point to any reference that discloses a “winding head comprising a

spreading assembly.” In fact, RMC does not even address this limitation. In order for a claim to be unpatentable for anticipation, all limitations of that claim must be disclosed in the reference. *PIN/NIP, Inc. v. Platte Chemical Co.*, 304 F.3d 1235, 1243 (Fed. Cir. 2002); MPEP § 706.02. Since RMC has not indicated any reference that discloses this limitation, the argument must fail. Similarly, while RMC contends that the additional limitation disclosed in claim 2 “described standard filament winding tooling technology,” RMC still does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claims 1 and 2 are unpatentable.

#### Application Claim 16

RMC contends that the additional limitation of claim 16 also “describes standard filament winding technology.” Again, however, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly.” In addition, RMC cites only to references [3] and [4] in support of its argument that the additional limitations of claim 16 were previously disclosed. As discussed above, these references are not prior art. Therefore, RMC has not established that claim 16 is unpatentable.

#### Application Claim 3

RMC contends that the additional limitation of claim 3 is “commonly used in commercially available tensioning devices.” While Applicants do not concede this point, RMC still does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 3 is unpatentable.

#### Application Claims 4 and 17

RMC concedes patentability of claims 4 and 17.

Application Claims 5 and 18

RMC contends that the additional limitations of claim 5 and 18 are also not novel. Again, while Applicants do not concede these points, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claims 5 and 18 are unpatentable.

Application Claim 6

RMC contends that the additional limitation of claim 6 is not novel. In support of this, RMC points to references [5] and [6]. As stated above, reference [6] is not prior art. Moreover, applicants are unable to find any reference in reference [5] to “a plurality of rods arranged to spread each fiber bundle entering the winding head.” In addition, RMC still does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 6 is unpatentable.

Application Claim 7

RMC also contends that the additional limitations of claim 7 are not novel. RMC does not, however, point to any reference that discloses all the limitations of claim 7, but rather only points to references that disclose the “roller” element. In addition, RMC still does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 7 is unpatentable.

Application Claims 8-10

RMC also contends that the additional limitations of claims 8-10 are not novel. With respect to claims 8 and 10, RMC does not cite to any references in support of its positions. Therefore, these arguments are without merit. With respect to claim 9, RMC relies on references [3]-[6]. As indicated above, however, references [3], [4], and [6] are

not prior art. Moreover, applicants were unable to find any reference in reference [5] corresponding to the additional limitation of claim 9. Finally, RMC still does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claims 8-10 are unpatentable.

Application Claims 11-13

RMC contends that the additional limitations of claims 11-13 are not novel. RMC does not, however, cite to any references in support of its positions. Therefore, these arguments are without merit. Moreover, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claims 11-13 are unpatentable.

Application Claim 14

RMC concedes patentability of claim 14.

Application Claim 15

RMC contends that the additional limitation disclosed in claim 15 is not novel. Again, however, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 15 is unpatentable.

Application Claim 19

RMC also contends that the additional limitation disclosed in claim 19 is not novel. Again, however, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 19 is unpatentable.



Application Claim 20

RMC also contends that the additional limitation disclosed in claim 20 is not novel. RMC relies on reference [9] in support of this argument. As indicated above, however, RMC has not provided Applicants with a copy of this reference. Moreover, RMC also does not point to any reference that discloses a “winding head comprising a spreading assembly.” Therefore, RMC has not established that claim 20 is unpatentable.

Application Claim 21

RMC concedes patentability of claim 21.

Application Claim 22

RMC contends that the additional limitation of claim 22 is not novel based on the arguments made with respect to claim 5. While Applicants do not concede this point, RMC does not point to any reference that discloses a “winding head comprising a spreading assembly” or “an articulator to rotate the spool section.” Therefore, RMC has not established that claim 22 is unpatentable.

Application Claim 24

RMC contends that the additional limitations of claim 24 are not novel based on the arguments made with respect to claims 6 and 7. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses “an articulator to rotate the spool section.” Therefore, RMC has not established that claim 24 is unpatentable.

Application Claim 25

RMC contends that the additional limitations of claim 25 are not novel based on the arguments made with respect to claims 6, 7, and 8. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses “an articulator to rotate the spool section.” Therefore, RMC has not established that claim 25 is unpatentable.

Application Claims 23, 26, 27, and 29

RMC contends that the additional limitations of claims 23, 26, 27, and 29 are not novel based on the arguments made with respect to claims 6, 9, 10, and 13, respectively. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses “an articulator to rotate the spool section.” Therefore, RMC has not established that claims 23, 26, 27, and 29 are unpatentable.

Application Claims 28 and 30

RMC contends that the additional limitations of claims 28 and 30 are not novel based on the arguments made with respect to claims 11, 12, and 14. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses “an articulator to rotate the spool section.” Therefore, RMC has not established that claims 28 and 30 are unpatentable.

Application Claim 31

RMC concedes that at least one portion of the additional limitation of this claim is novel. Moreover, RMC does not point to any reference that discloses a “winding head

comprising a spreading assembly” or “an articulator to rotate the spool section.”

Therefore, RMC has not established that claim 31 is unpatentable.

Application Claims 32 and 33

RMC contends that the additional limitations of claims 32 and 33 are not novel based on the arguments made with respect to claims 19 and 20. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses “an articulator to rotate the spool section.” Therefore, RMC has not established that claims 32 and 33 are unpatentable.

Application Claim 34

RMC contends that claim 34 is not novel because, in its opinion, the “components and functions described here are all known to those skilled in the art.” RMC, however, cites to no references in support of this argument. Moreover, nowhere in this document does RMC argue that any reference discloses the limitation of this claim that “the winding eyes, rods, and roller being arranged to spread a plurality of fiber bundles entering the winding head and to arrange the spread fiber bundles in side-by-side parallel manner for application to an object to be wound with fiber bundles.” Therefore, RMC has not established that claim 34 is unpatentable.

Application Claims 35-38

RMC contends that the additional limitations of claims 35-38 are not novel based on the arguments made with respect to claims 6, 9, 10, and 34. For the same reasons stated above, those arguments have no merit. Therefore, RMC has not established that claims 35-38 are unpatentable.

Application Claim 39

RMC contends with respect to claim 39 that four of the limitations of that claim “describe the functions of various parts of a filament winding machine and a mandrel.” RMC, however, does not cite any references in support of this argument. Therefore, this argument is meritless. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool of a fiber bundle for a winding assembly configured to travel along a path substantially parallel to the axis of rotation of the mandrel.” In fact, RMC does not even address this limitation. Therefore, RMC has not established that claim 39 is unpatentable.

Application Claim 40

RMC contends that the additional limitation of this claim is not novel based only on reference [6]. As stated above, reference [6] is not prior art. Therefore this argument is without merit. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool. . . .” Therefore, RMC has not established that claim 40 is unpatentable.

Application Claim 41

RMC contends that the additional limitations of claim 41 are not novel based on the arguments made with respect to claim 9. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool. . . .” Therefore, RMC has not established that claim 41 is unpatentable.

Application Claim 42

RMC contends that the additional limitations of this claim are not novel because “filament winding has been used for decades to apply a fiber bundle in ‘a substantially uniform thickness.” RMC, however, does not cite any reference to support this argument. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool. . . .” Therefore, RMC has not established that claim 42 is unpatentable.

Application Claims 43-45

RMC contends that the additional limitations of claims 43-45 are not novel based on a representation that non-geodesic winding paths have been known in the past. RMC, however, does not cite any reference to support this argument. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool. . . .” Therefore, RMC has not established that claims 43-45 are unpatentable.

Application Claims 46-47

RMC contends that the additional limitations of claims 46 and 47 are not novel based on the arguments made with respect to claims 19 and 20, respectively. For the same reasons stated above, those arguments have no merit. Moreover, RMC does not point to any reference that discloses the step of “providing at least one spool. . . .” Therefore, RMC has not established that claims 46-47 are unpatentable.

Application Claim 48

RMC’s arguments with respect to this claim are flawed at least because RMC misquotes the preamble of the claim. The preamble claims “a system for filament winding . . .” not “a method of filament winding” as stated by RMC. Because of its

misreading of this claim, all of RMC's arguments are directed to the functions performed by the various elements of the claim, rather than those claim elements themselves. RMC does not cite any references or make any arguments with respect to the actual claim elements. Therefore, RMC has not established that claim 48 is unpatentable.

Application Claims 49-56

RMC contends that the additional limitations of claims 49-56 are not novel based on the arguments made with respect to claims 3, 6, 9, 19, 20, 40, 42, 43, 44, and 45. For the same reasons stated above, those arguments have no merit. Moreover, as stated with respect to claim 48, due to RMC's misunderstanding of these claims, RMC does not make any arguments with respect to the actual elements of those claims, only the functions performed by some of those elements. Therefore, RMC has not established that claims 49-56 are unpatentable.

Application Claims 57 and 58

With respect to these two claims, RMC provides only conclusory statements that the elements of those claims are found in filament winding machines. RMC, however, does not cite to any references in support of these positions. Therefore, these arguments are without merit and RMC has not established that claims 57 and 58 are unpatentable.

**CONCLUSION**

For at least all the reasons stated above, the document at issue (or any of the attachments or cited references) cannot and has not established the unpatentability of any claim of the present application. Applicants reserve the right to take further action to establish the patentability of the disclosed invention over the listed document and the

references cited therein, should the document or one or more of the references be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: April 9, 2004

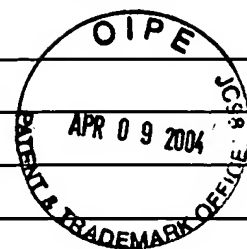
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D. Brian Kacedon  
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## INFORMATION DISCLOSURE CITATION

Atty. Docket No.	7707.0021-00	Appln. No.	10/086,685
Applicant	Alan H. ANDERSON, et al.		
Filing Date	March 4, 2002	Group:	1733



U.S. PATENT DOCUMENTS							
Examiner Initial*		Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS							
		Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	December 29, 2003 Letter from Craig Metcalf of Madson & Metcalf (1 page) including Attachment 1 (8 pages)
	Reference [1] - Radack, David V., "Reading and Understanding Patent Claims," <a href="http://www.tms.org/pubs/journals/JOM/matters/matters-9511.html">http://www.tms.org/pubs/journals/JOM/matters/matters-9511.html</a> , Sept. 29, 2003. (3 pages)
	Reference [2] - "Filament Winding Composite Structure Fabrication," Society for the Advancement of Material and Process Engineering, 1991. (13 pages)
	Reference [3] - Entec Composite Machines Home Page, <a href="http://www.entec.com">http://www.entec.com</a> , December 19, 2003. (2 pages)
	Reference [4] - McClean Anderson Home Page, <a href="http://www.mcleananderson.com">http://www.mcleananderson.com</a> , December 19, 2003. (1 page)
	Reference [5] - Walsh, Paul et al., "Carbon Fiber Property Translation into Composite - A Comparison of Commercial Grade 48K Carbon Fibers Versus 12K Aerospace Fibers." (16 pages)
	Reference [6] - "The Mission: To Deliver Large-Tow Carbon Fiber in Filament Winding Applications." (21 pages)
	Reference [7] - User Manual for Cadwind NG for Windows, 1999. (4 pages)
	Reference [8] - Marchel, Oliver, "Space Qualification Program for CFRP-Prepregs Used for Design of Deployable Booms as a Main Structural Part of a Solar Sail." (12 pages)

Examiner	Date Considered
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
Form PTO 1449	Patent and Trademark Office - U.S. Department of Commerce

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